

Report Date: 22 May 2014

Summary Report for Individual Task
052-247-1304
Construct a Fixed Rope System
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - The materials contained in this course have been reviewed by the course developers in coordination with the Ft Leonard Wood MO/MSCOE foreign disclosure authority. This course is releasable to students from all requesting foreign countries without restrictions.

Condition: You are a member of an Urban Search and Rescue (US&R) team and given a high angle rope rescue incident, edge protection, one inch webbing, carabiner(s), anchor plate, anchor point, life safety rope and the required personal protective equipment (PPE). This task should not be trained in MOPP 4.

Standard: Construct a fixed rope system that can accommodate the load by ensuring the anchor system fits the needs of the given incident, edge protection is placed to prevent damage to the rope and the results meet the incident requirements for descending and ascending operations.

Special Condition: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: All required references and technical manuals will be provided by the local US&R command.

Notes: Always construct a belay system on a separate fixed rope. (See task 031-627-2151)

Performance Steps

1. Don the appropriate level of PPE.
2. Calculate the system safety factor (SSF) for the fixed rope system.
Note: A System Safety Factor (SSF) of 10:1 is the minimum acceptable ratio for the load.
 - a. Determine the minimum breaking strength (MBS) of the rope system's weakest component.
 - b. Calculate the weight of the load that will be on the fixed rope system.
 - c. Divide the MBS of the weakest component by the load weight to determine the SSF.
Note: If the SSF is not obtained, replace or increase the capacity of the weakest component and re-calculate.
3. Construct an anchor system for the given incident. (See task 031-627-2148 or 052-247-1305)
4. Rig the main-line rope system.
 - a. Attach an anchor plate to the anchor system with a carabiner.
 - b. Tie a figure eight on a bight on the standing end of the rope.
 - c. Attach the figure eight on a bight knot to the anchor plate with a carabiner.
5. Place the edge protection (as needed).
Note: When working near the edge ensure the edgeman is tied into a separate rope system to prevent a fall.
 - a. Tie off the edge protection to prevent movement.
 - b. Attach the fixed rope to the edge protection.

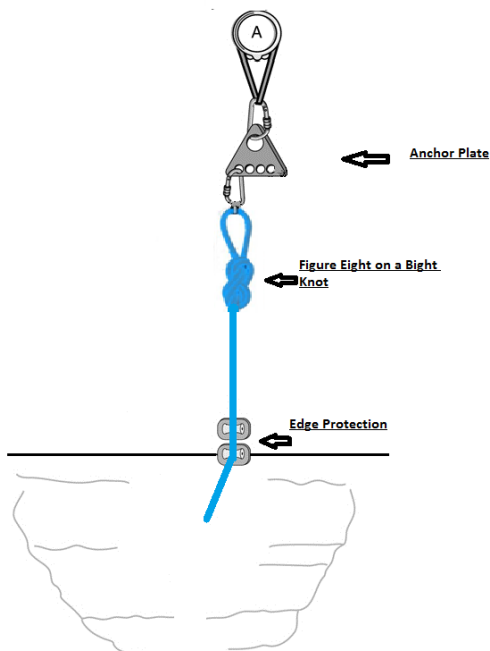


Figure 052-247-1304-1
Fixed Rope System

c. Inform the safety officer when the edge protection is in place.

6. Conduct a system safety check. (See task 031-627-2152)

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all measures are passed (P). Score the Soldier a NO GO if any measures failed (F). If the Soldier fails any measures, show them how to do it correctly.

Evaluation Preparation: Set-up: Provide the Soldier with all items listed in the conditions. Brief Soldier: Tell Soldier to Construct a Fixed Rope System.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Donned the appropriate level of PPE.			
2. Calculated the system safety factor (SSF) for the fixed rope system.			
3. Constructed an anchor system for the given incident. (See task 031-627-2148 or 052-247-1305)			
4. Rigged the main-line rope system.			
5. Placed the edge protection (as needed).			
6. Conducted a system safety check. (See task 031-627-2152)			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	IFSTA	International Fire Service Training Association (IFSTA) Fire Service Search and Rescue, 7th Edition	No	No
	IFSTA - 1st Edition	IFSTA Technical Rescue for Structural Collapse, 1st Edition	No	No
	NFPA 1006	Standard for Rescue Technician Professional Qualifications	Yes	Yes

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1307	Ascend a Fixed Rope System	052 - Engineer (Individual)	Approved
052-247-1303	Belay a Falling Load	052 - Engineer (Individual)	Approved

031-627-2152	Conduct a System Safety Check	031 - CBRN (Individual)	Approved
031-627-2151	Construct a Belay System	031 - CBRN (Individual)	Approved
031-627-2148	Construct a Single Point Anchor System	031 - CBRN (Individual)	Approved
052-247-1308	Rappel a Fixed Rope System	052 - Engineer (Individual)	Approved
052-247-1301	Tie Knots, Bends, and Hitches for Rope Rescues	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1310	Rescue a Conscious Victim from a Suspended Location	052 - Engineer (Individual)	Approved
052-247-1307	Ascend a Fixed Rope System	052 - Engineer (Individual)	Approved
052-247-1301	Tie Knots, Bends, and Hitches for Rope Rescues	052 - Engineer (Individual)	Approved
052-247-1331	Operate a Raising System	052 - Engineer (Individual)	Approved
052-247-1309	Perform a Self Rescue from a Jammed Rack	052 - Engineer (Individual)	Approved

Supported Collective Tasks :

Task Number	Title	Proponent	Status
05-3-8014	Perform a Structural Collapse Rescue Operation	05 - Engineers (Collective)	Approved
05-3-8012	Perform Trench Rescue Operations	05 - Engineers (Collective)	Approved
05-3-8013	Perform Confined Space Rescue Operations	05 - Engineers (Collective)	Approved
05-3-8011	Perform Rope Rescue Operations	05 - Engineers (Collective)	Approved